**Answers > Research Guidance**

Why is there a global energy crisis on planet earth?

The highest amounts of energy used are fossil fuels (coal, fossil oil, nuclear energy). The problem with these types of energies is that they’re finite. The natural production of these energies comes to millions of years. There are predictions that we will soon have a lack of these products. The more the population numbers increase, the rather decrease the offer of fossil fuels. The more the demand is rising the higher the prices will be.

What are fossil fuels and how are they formed?

Coal, oil and gas are called fossil fuels because they have been formed from the organic remains of prehistoric plants and animals. ([www.darvill.clara.net](http://www.darvill.clara.net)). They take a long time to reform sometimes it takes a time period over millions of years. The process of the formation is not totally clear. But it contains the bury of fossil decays by sediments. The exposure of heat and pressure leads to the formation of fossil fuels. (<http://www.apsenergyconservation.org/PDF/MS-FormationOfFossil.pdf>)

Which countries of the world have fossil fuels? Explain in detail

* Saudi Arabia
* Russia
* USA
* Iran
* Mexico
* China
* Norway
* Canada
* Venezuela
* Kuwait
* (Source: Wikianswers.com)

What are the major alternatives to fossil fuels? Explain in detail

-Solar energy 🡪 solar energy is the energy received by earth from the sun. This energy is in the form of solar radiation, which makes the production of solar electricity possible.

- Wind energy 🡪 Energy received from the movement of the wind across the earth. This energy is a result of the heating of our oceans, earth, and atmosphere by the sun. (Source: http://www.clean-energy-ideas.com/energy\_definitions/definition\_of\_wind\_energy.html)

- Hydroelectric power 🡪 Hydro energy is simply energy that is taken from water and converted to electricity. Hydro energy can be obtained by using many methods of capture. The most common method of using energy from water is a hydroelectric dam, where water coming down through an area causes turbines to rotate and the energy is captured to run a generator. Power can also be generated from the energy of tidal forces or wave power, which uses the energy created by waves. (<http://www.greenenergyhelpfiles.com/hydroenergy.htm>)

- Geotherm 🡪 The ground beneath our feet contains a significant amount of energy in the form of heat. All of this geothermal energy has the potential to generate **geothermal power** to provide large amounts of electricity. (Source: <http://www.clean-energy-ideas.com/geothermal_power.html>)

Advantages & Disadvantages for alternatives to fossil fuels

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|  | Advantage | Disadvantage |
| Wind | Good for surrounding environment, takes less space, wind is a free element, connected with solar energy > efficient energy for development countries > great source | Wind is an unreliable factor, less energy will be produced compared to fossil fuels, construction is expensive, noisy |
| Solar | No noise, no pollution, little maintenance, easy to install, | Expensive, useless at cloudy days/storm |
| Geotherm | No by products, no output for greenhouse effect, self-sufficient, do not need the destruction of the environment for building | Area should consist of hot rocks, risk of harmful gases escaping, pollution due to improper drilling |
| Water | Electricity can be produced at a constant rate, water can be saved when no electricity is needed, last many decades, | Extremely expensive, destroy natural environment, risk of flooding, people in expectable flooding areas have to move away |